

Victoria Shanghai Academy  
Mathematics - Problem Solving Strategy  
The “Trial and Error” Strategy

Adapted from 參考書目:

梁易天, 劉應泉. (2008). 新一代數學第二版-數學解難訓練冊 - 小四 (第二版). 香港: 朗文香港教育.

**Definition 定義**

The “Trial and Error” Strategy is used when there is fixed relationship between criteria, but the combinations or possibilities are too many and cannot be calculated by forming an equation. We need to list all the combinations or possibilities and find out the group that fits all of the criteria.

**Problem 1 難題一**

There are 32 oranges in two boxes, box A and box B. The number of oranges in box A is a factor of the number of oranges in box B. How many oranges are in each box? (List all the possible answers.)

**Solution 解難分析**

The key to solving this problem is to list all the possible combinations and find out which group(s) fulfills the criteria.

Number of oranges in box A 箱 A 有橙 (個)	Number of oranges in box A 箱 B 有橙 (個)	Is A a factor of B? A 是 B 的因數嗎?	Number of oranges in box A 箱 A 有橙 (個)	Number of oranges in box A 箱 B 有橙 (個)	Is A a factor of B? A 是 B 的因數嗎?
1	31	✓	9	23	
2	30	✓	10	22	
3	29		11	21	
4	28	✓	12	20	
5	27		13	19	
6	26		14	18	
7	25		15	17	
8	24	✓	16	16	✓

**Answer 答案**

Number of oranges in box A and box B is: 1 and 31; 2 and 30, 4 and 28, 8 and 24, 16 and 16.